



FortiAnalyzer 2000E

Information

Box Includes



FortiAnalyzer 2000E



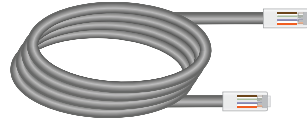
Information Supplement



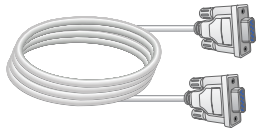
FortiAnalyzer QuickStart Guide



(2) Power Cable



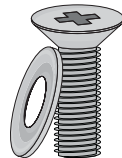
Ethernet Cable



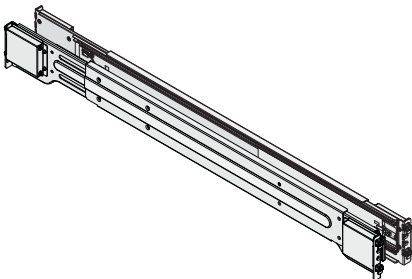
Console Cable



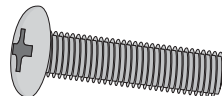
(2) M4 Flat Head Screws



(8) M5 12L Flat Head Screws & Washers



(2) Rail-Mount Brackets



(2) M5 20L Truss Head Screws

Installation

The FortiAnalyzer unit can be mounted in any standard 19 inch rack unit with the provided mounting hardware.

Please also read "Cautions and Warnings" prior to installing your device.

Caution: The rack must be stabilized before sliding the unit out for servicing. Failure to stabilize may cause the rack to tip over.

Electrostatic discharge (ESD) can damage your Fortinet equipment.

To avoid personal injury or damage to the unit, it is recommended that two or more people install the unit into the rack.

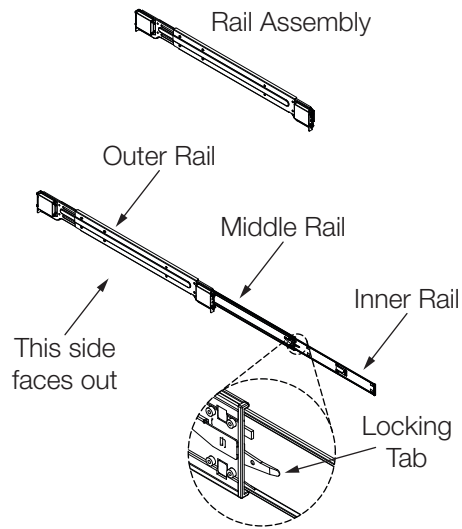
Do not place heavy objects on the unit.

Rack Precautions

- Ensure the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on the jacks.
- For single rack installation, stabilizers should be attached to the rack.
- For multiple rack installations, the racks should be coupled together.
- Ensure the rack is stable before extending a component from the rack.
- Only extend one component at a time; extending two or more simultaneously may cause the rack to become unstable.

Note: After installing the device into the rack, install the hard disk drives into the device.

Rack Rail Parts



The rail assembly consists of three parts:

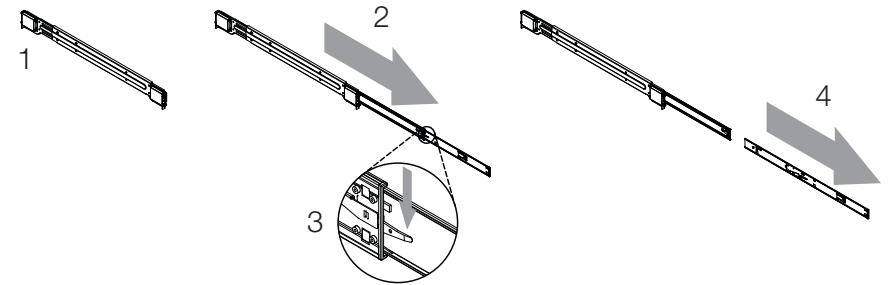
- Outer rail: connects to the rack
- Middle rail: connects the inner and outer rails
- Inner rail: connects to the device.

The inner rail has a locking tab that locks the device into place when it is installed and pushed into the rack. This prevents the device from sliding fully out of the rack when the device is being worked on.

There are four steps to install the device into the rack:

1. Disassemble the rail assembly
2. Attach the inner rails to the device
3. Install the outer rails on a rack
4. Install the device into the rack

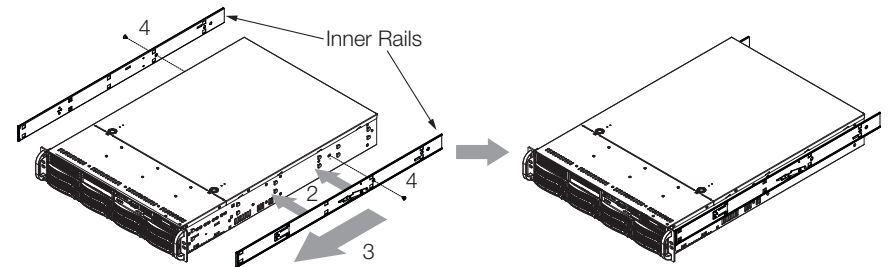
Disassemble the rail assembly:



1. Identify the left and right rail assemblies.
2. Pull out the inner rail until it is fully extended.
3. Press down the locking tab to release the inner rail.
4. Remove the inner rail from the outer rail.
5. Repeat steps 2 - 4 for the remaining rail assembly.

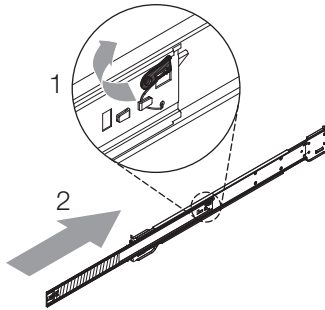
Caution: Do not pick up the server by the front handles. They are designed to only pull the unit from the rack.

Attach the inner rails to the device:

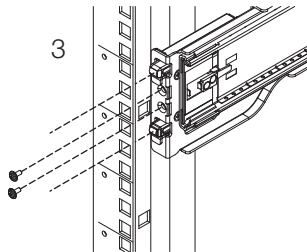


1. Ensure that the right and left rails are correctly identified.
2. Place the inner rail against the side of the device, ensuring that the hooks on the side of the device align with the holes in the rail.
3. Slide the rail towards the front of the device until the rail clicks into the locked position.
4. Optionally, secure the rail to the device using the provided M4 Flat Head screws.
5. Repeat steps 2 - 4 for the remaining rail.

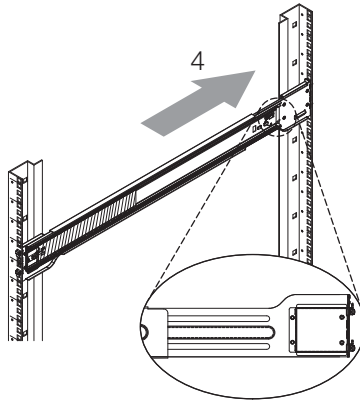
Install the outer rails on a rack:



1. Press up on the locking tab on the back of the middle rail.
2. Push the middle rail back into the outer rail.

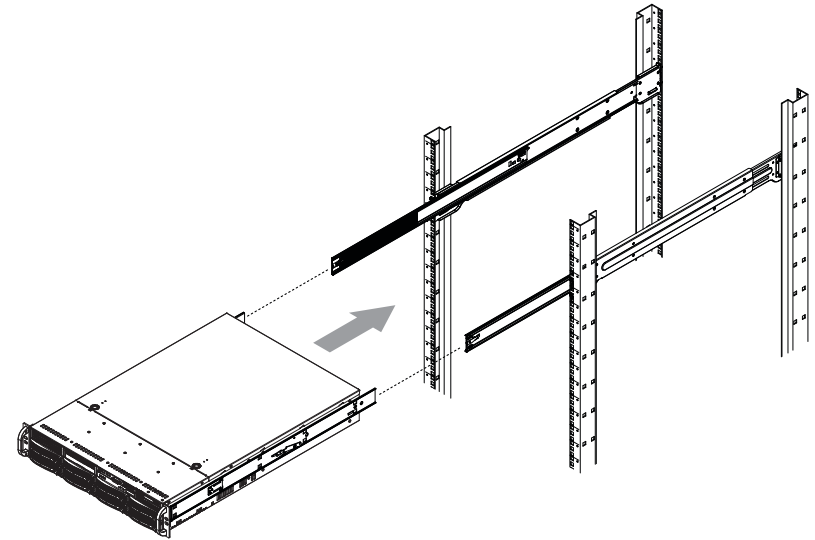


3. Hang the hooks on the front of the outer rail to the slots on the rack. Use two of the provided washers and M5 12L Flat Head screws to secure the rail to the rack.



4. Pull out the back of the outer rail to adjust its length until it fits properly in the rack.
5. Hang the hooks on the back of the rail to the slots on the back of the rack. Use two of the provided washers and M5 12L Flat Head screws to secure the rail to the rack.
6. Repeat steps 1 - 5 for the remaining rail.

Install the device into the rack:



1. Ensure that the inner rails are properly connected to the device, and that the outer rails are securely attached to the rack.
2. Pull the middle rail out from the front of the outer rail until it locks.
3. Align the inner rails with the middle rails and slide the device onto the rails until the locking tab on the inner rails clicks into the front of the middle rails. Ensure that even pressure is applied to both sides of the device while doing this.
4. Push down the locking tabs on both sides at the same time, then push the device all the way into the rack.
5. When the unit has been completely pushed into the rack, the locking tabs will click into the locked position.
6. For additional security, secure the chassis handles to the front of the rack with the provided M5 20L Truss Head screws.

After the device is installed in the rack and the hard disk drives are installed, plug the supplied power cables into the rear of the unit and then into grounded electrical outlets or separate power sources, such as uninterruptible power supplies (UPS) or power distribution units (PDU).

Note: Each power cable should be connected to a different power source. In this way, if one power source fails, the other may still be operational and the unit will not lose power.

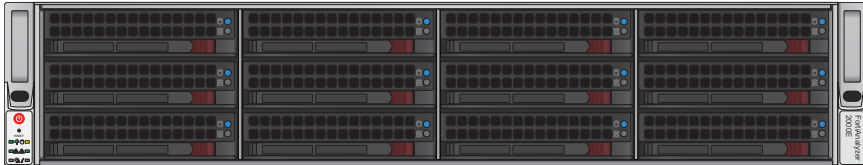
FortiAnalyzer 2000E

Hard Drive Activity

- Flashing Blue: HDD in use
- Off: No HDD activity

HDD

- Flashing Red: Hard disk rebuilding
- Red: Hard disk failure



Power

- Green: The unit is on
- Off: The unit is off

Hard Drive Activity

- Flashing Yellow: HDD in use
- Off: No HDD activity

Ethernet Ports Activity

- Flashing Green: Transmitting & receiving data
- Off: No link activity

Power Fail

- Red: A power supply has failed
- Off: Normal operation

Information

- Flashing Red (1Hz): Fan failure
- Red: System in overheat condition
- Flashing Red (0.25Hz): Redundant power supply failure
- Off: Normal operation

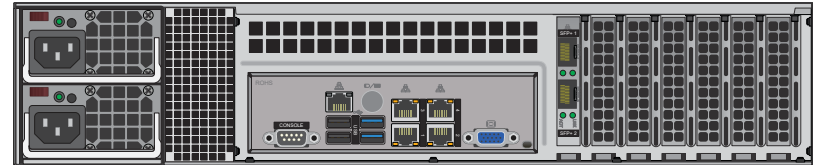
FortiAnalyzer 2000E

SFP+ Ports Link

- Green: Connected at 10Gbps
- Amber: Connected at 1Gbps
- Off: Not connected

SFP+ Ports Activity

- Flashing Green: Transmitting & receiving data
- Off: No link activity



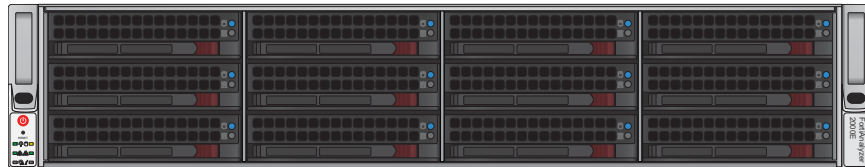
Ethernet Ports Speed

- Amber: Connected at 1Gbps
- Green: Connected at 100Mbps
- Off: Connected at 10Mbps or not in use

Ethernet Ports Link/Activity

- Flashing Amber: Transmitting & receiving data
- Off: No link established

FortiAnalyzer 2000E



Power Button

HDD 1 to 12

Twelve 3TB hard disk drives

HDD 2

HDD 1

HDD 0

5

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FortiAnalyzer 2000E

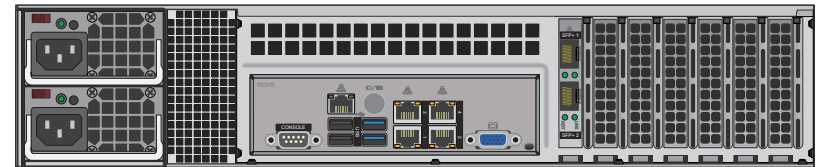
Power

100-240V AC, 11-4A, 50-60Hz
Redundant power supplies

VGA Port
Not in use

SFP Ports (SFP+)

10 Gbps small form-factor
pluggable transceiver ports



Ethernet Ports 1 - 4 (RJ-45)

Gigabit Ethernet network connections

USB Ports (USB A)

USB 3.0 server ports

IPMI Port (RJ-45)

Do not use

Changing the default password is strongly recommended

See <http://cookbook.fortinet.com/changing-ipmi-password>

USB Ports (USB A)

USB 2.0 server ports

Console Port (DB-9)

Optional connection to the management computer

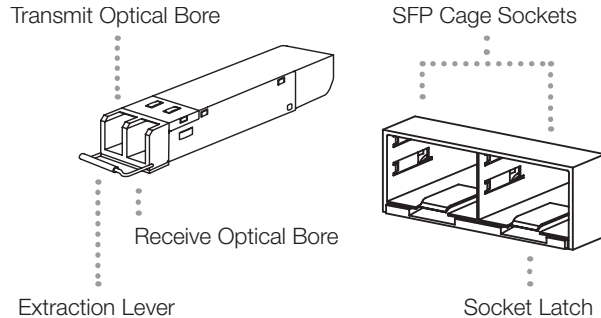
Provides access to the CLI

SFP Transceivers

Caution: SFP transceivers are static sensitive devices. Use an ESD wrist strap or similar grounding device when handling transceivers.

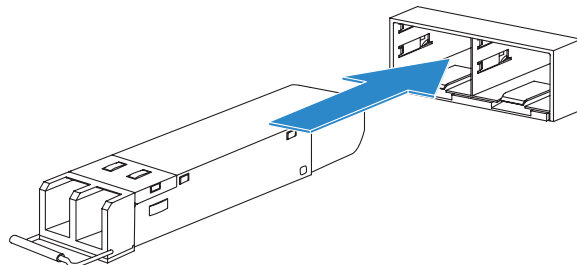
Do not force the SFP transceivers into the cage slots. If the transceiver does not easily slide in and click into place, it may not be aligned correctly or may be upside down. If this happens, remove the SFP transceiver, realign it or rotate it and slide it in again.

Note: Installing and removing SFP transceivers can shorten their useful life. Do not install or remove transceivers more than is necessary.



To install the SFP transceivers

1. Ensure that you are properly grounded.
2. Remove the caps from the SFP cage sockets on the front panel of the unit.
3. Position the SFP transceiver in front of the cage socket opening and ensure that the transceiver is correctly oriented. When the transceiver is correctly oriented, the extraction lever will be level with the socket latch.
Note: SFP cage socket orientation may vary. Ensure that the SFP transceiver module is correctly oriented each time that you are inserting a transceiver.
4. Hold the sides of the SFP transceiver and slide it into the cage socket until it clicks into place.

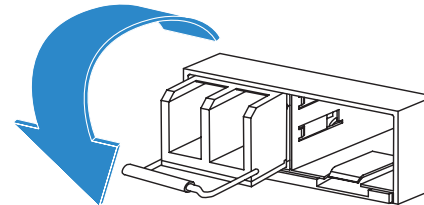


5. Press the transceiver firmly into the cage socket with your thumb.

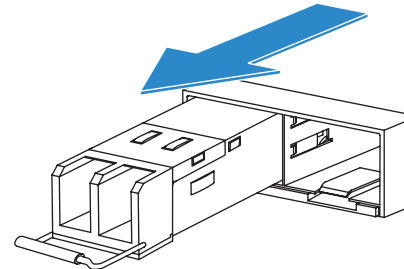
6. Verify that the transceiver is latched correctly by grasping the sides of the transceiver and trying to pull it out without lowering the extraction lever. If the transceiver cannot be removed, it is installed and latched correctly. If the transceiver can be removed, reinsert it and press harder with your thumb. If necessary, repeat this process until the transceiver is securely latched into the cage socket.

To remove the SFP transceivers

1. Ensure that you are properly grounded.
2. If applicable, disconnect the fiber-optic cable from the transceiver connector and install a clean dust plug in the transceiver's optical bores.
3. Pull the extraction lever out and down to eject the transceiver. If you are unable to use your finger to open the lever, use a small flat-head screwdriver or other similar tool to open the lever.



4. Hold the sides of the transceiver and carefully pull it away from the cage socket.



5. Replace the cap on the SFP cage socket and place the removed SFP transceiver into an antistatic bag.

Caution: Do not install or remove SFP transceivers while fiber-optic cables are still attached. This can cause damage to the cables, cable connectors, and the optical interfaces. It may also prevent the transceiver from latching correctly into the socket connector.

Note: Follow proper fiber-optic handling procedures when installing and removing SFP transceivers to ensure the devices remain clean and are not damaged.

Cautions and Warnings

Environmental Specifications

Ambient operating temperature: 0°C to 40°C

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

Instructions de montage en rack - Les instructions de montage en rack suivantes ou similaires sont incluses avec les instructions d'installation:

Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{max}) specified by the manufacturer. Température ambiante élevée - Si l'est installé dans un rack fermé ou à unités multiples, la température ambiante de fonctionnement de l'environnement du rack peut être supérieure à la température ambiante de la pièce. Par conséquent, il est important d'installer le matériel dans un environnement respectant la température ambiante maximale (T_{max}) stipulée par le fabricant.

Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Ventilation réduite - Installation de l'équipement dans un rack doit être telle que la quantité de flux d'air nécessaire au bon fonctionnement de l'équipement n'est pas compromise.

Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading. Chargement Mécanique - Montage de l'équipement dans le rack doit être telle qu'une situation dangereuse n'est pas liée à un chargement mécanique inégal.

Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Surtenstion - Il convient de prendre l'ensemble des précautions nécessaires lors du branchement de l'équipement au circuit d'alimentation et être particulièrement attentif aux effets de la suralimentation sur le dispositif assurant une protection contre les courts-circuits et le câblage. Ainsi, il est recommandé de tenir compte du numéro d'identification de l'équipement.

Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips). Fiabilité de la mise à la terre - Fiabilité de la mise à la terre de l'équipement monté en rack doit être maintenue. Une attention particulière devrait être accordée aux connexions d'alimentation autres que les connexions directes au circuit de dérivation (par exemple de l'utilisation de bandes de puissance).

Refer to specific Product Model Data Sheet for Environmental Specifications (Operating Temperature, Storage Temperature, Humidity, and Altitude).

Référez à la Fiche Technique de ce produit pour les caractéristiques environnementales (Température de fonctionnement, température de stockage, humidité et l'altitude).

Safety

Moving parts — Hazardous moving parts. Keep away from moving fan blades. Pièces mobiles — Pièces mobiles dangereuses. Se tenir éloigné des lames mobiles du ventilateur.

Warning: Equipment intended for installation in Restricted Access Location. **Avertissement:** Le matériel est conçu pour être installé dans un endroit où l'accès est restreint.

Battery — Risk of explosion if the battery is replaced by an incorrect type. Do not dispose of batteries in a fire. They may explode. Dispose of used batteries according to your local regulations. IMPORTANT: Switzerland: Annex 4.10 of SR814.013 applies to batteries.

Batterie — Risque d'explosion si la batterie est remplacée par un type incorrect. Ne jetez pas les batteries au feu. Ils peuvent exploser. Jetez les piles usagées conformément aux réglementations locales. IMPORTANT: Suisse: l'annexe 4.10 de SR814.013 s'appliquent aux batteries.

警告
本電池如果更換不正確會有爆炸的危險
請依製造商說明書處理用過之電池

CAUTION: Shock Hazard. Disconnect all power sources. **ATTENTION:** Risque d'électrocution. Débranchez toutes les sources d'alimentation.

Caution: Slide/rail mounted equipment is not to be used as a shelf or a work space. **Attention:** Un équipement monté sur bâti ne doit pas être utilisé sur une étagère ou dans un espace de travail.

Regulatory Compliance

Federal Communication Commission (FCC) – USA

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received; including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

WARNING: Any changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada Equipment Standard for Digital Equipment (ICES) – Canada

CAN ICES-3 (A) / NMB-3 (A)

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European Conformity (CE) - EU

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



Product Safety Electrical Appliance & Material (PSE) – Japan

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Voluntary Control Council for Interference (VCCI) – Japan

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Bureau of Standards Metrology and Inspection (BSMI) – Taiwan

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The presence conditions of the restricted substance (BSMI RoHS table) are available at the link below:
<https://www.fortinet.com/bsmi>

China

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Korea Certification (KC) – Korea

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Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. Executables containing this object code plus portions of the Library will still fall under Section 6.) Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a “work that uses the Library” with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for your own use and reverse engineering for debugging such modifications. You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the Library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable. It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

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a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

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